Notice of Allowability	Application No.	Applicant(s)	
	10/750,924	JALLOUL ET AL.	
	Examiner	Art Unit	
	Dominic E. Rego	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/08/06*.

2. ☒ The allowed claim(s) is/are *1-30*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-30 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 13, Shin et al. *(US Patent Application Publication #20040093178)* teaches a method for calculating signal-to-interference ratio (SIR) of a mobile device in a wireless communication system (abstract), the method comprising: Lindoff *(US Patent Application Publication #20050075122)* teaches scaling the estimated interference power and/or the total power estimate (Paragraphs 0030 and 0031);

Shin et al. teaches calculating the SIR by dividing the estimated signal power by the estimated interference power *(Paragraph 0005: Shin teaches the SIR is then determined as the ratio between the estimated signal power and interference power).*

However, none of the prior art cited alone or in combination provides the motivation to teach processing a communication signal transmitted by the mobile device to obtain a total power estimate of combined signal plus noise, the step of processing including calculating a slot energy signal using a number of signal values of the communication signal and a number of pilot symbols;

estimating interference power of the communication signal, the step of estimating including examining squared differences between values relating to adjacent pilot symbols;

subtracting the estimated interference power or the scaled estimated interference power from the total power estimate or the scaled total power estimate to thereby estimate signal power.

Regarding claims 8,19, and 23, Shin et al. *(US Patent Application Publication #20040093178)* teaches in a wireless communication system having a base station and a mobile device, a method for adjusting power settings of the mobile device comprising: calculating signal-to-interference ratio (SIR) of communication signals transmitted to the base station by the mobile device (abstract), the calculating step including: Lindoff *(US Patent Application Publication #20050075122)* teaches scaling the estimated interference power and/or the total power estimate;

Shin et al. teaches calculating the SIR by dividing the estimated signal power by the estimated interference power *(Paragraph 0005: Shin teaches the SIR is then determined as the ratio between the estimated signal power and interference power)*;

Hayashi et al. *(US Patent Application Publication #20040266469)* teaches comparing the calculated SIR with a target SIR to thereby generate a power control signal; transmitting the power control signal from the base station to the mobile phone; and adjusting the power of the communication signals transmitted by the mobile phone based on the power control signal *(Paragraph 0012)*.

However, none of the prior art cited alone or in combination provides the motivation to teach processing a communication signal transmitted by the mobile device, to obtain a total power estimate of combined signal plus noise, the step of

processing including calculating a slot energy signal using a number of signal values of the communication signal and a number of pilot symbols;

estimating interference power of the communication signal, the step of estimating including examining squared differences between values relating to adjacent pilot symbols;

subtracting the estimated interference power or the scaled estimated interference power from the total power estimate or the scaled total power estimate to thereby estimate signal power.

Regarding claim 22, Shin et al. *(US Patent Application Publication #20040093178)* a wireless communication system having base station and a mobile device, comprising: a processor *(inherent in the system)*; a memory communicatively coupled to the processor *(inherent in the system)*;

Lindoff et al. *(US Patent Application Publication #20050075122)* scale the estimated interference power and/or the total power estimate *(Paragraph 0030 and 0031)*;

store the scaled estimated interference power *(inherent)*;

Shin et al. teaches calculate the SIR by dividing the estimated signal power by the estimated interference power (Paragraph 0005: Shin teaches the SIR is then determined as the ratio between the estimated signal power and interference power).

However, none of the prior art cited alone or in combination provides the motivation to teach software executing in the processor configured to: process a communication signal transmitted by the mobile device to obtain a total power estimate

of combined signal plus noise, the step of processing including calculating a slot energy signal using a number of signal values of the communication signal and a number of pilot symbols;

store the processed communication signal in the memory;

estimate interference power of the communication signal, including examining squared differences between values relating to adjacent pilot symbols;

store the estimated interference power in the memory;

subtract the estimated interference power or the scaled estimated interference power from the total power estimate or the scaled total power estimate to thereby estimate signal power;

store the scaled estimated signal power in the memory.

Regarding claims 24 and 25, applicants include the allowable subject matter of claim 2; therefore, claim 24 and 25 are allowable with the same reasons set forth in the previous office action mailed 09/08/2006.

Dependent claims 2-7,9-12,14-18,20,21, and 26-30 are allowable for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic E. Rego whose telephone number is 571-272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dominic E. Rego
03/02/2007

NAY MAUNG
SUPERVISORY PATENT EXAMINER